

**TIME-SWITCHED PREAMBLE GENERATOR, METHOD OF GENERATING  
AND MULTIPLE-INPUT, MULTIPLE-OUTPUT COMMUNICATION SYSTEM  
EMPLOYING THE GENERATOR AND METHOD**

**ABSTRACT OF THE DISCLOSURE**

The present invention is directed to a time-switched preamble generator and method of generating a time-switched preamble for use with a multiple-input, multiple-output (MIMO) transmitter employing first and second transmit antennas. In one embodiment, the time-switched preamble generator includes an initial preamble formatter configured to provide a first preamble to the first transmit antenna and a second preamble to the second transmit antenna during an initial time interval. The time-switched preamble generator also includes a subsequent preamble formatter coupled to the initial preamble formatter and configured to provide the second preamble to the first transmit antenna and the first preamble to the second transmit antenna during a subsequent time interval.